

Claims

What is claimed is:

- 1 1. An endotracheal tube introducer (“introducer”) for slidably removable disposition within an
2 endotracheal tube (“ETT”), said introducer having a wall defining a lumen extending between a
3 proximal end and a distal end of said introducer, said wall having an outer diameter that is less
4 than an inner diameter of said ETT, and said wall being circumscribed by an invertibly attached
5 shroud for distal-ward (“forward”) flexion and proximal-ward (“rearward”) flexion.
- 1 2. The introducer of claim 1, wherein said shroud has a substantially frusto-conical shape
2 extending from a first circle, in a first plane perpendicular to a longitudinal axis of said
3 introducer and coincident with a ring of said introducer, said ring forming a circumferential pivot
4 for said flexion of said shroud, to a second circle in a second plane parallel to said first plane,
5 said second circle of said shroud being generally coaxial with said introducer and unattached to
6 said introducer.
- 1 3. The introducer of claim 2, wherein said first circle of said shroud is invertibly attached to said
2 ring of said introducer.
- 1 4. The introducer of claim 3 wherein said shroud flexes forward and rearward with respect to said
2 ring.

1 5. The introducer of claim 1, wherein said shroud has a substantially frusto-conical shape
2 extending from a first circle, in a first plane perpendicular to a longitudinal axis of said
3 introducer and coincident with a ring of said introducer, said ring forming a circumferential pivot
4 for said flexion of said shroud, to an ellipse in a second plane that is either parallel or other than
5 parallel to said first plane, said ellipse being unattached to said introducer.

1 6. The introducer of claim 5, wherein said first circle of said shroud is invertibly attached to said
2 ring of said introducer.

1 7. The introducer of claim 6, wherein said shroud flexes forward and rearward with respect to
2 said ring.

1 8. The introducer of claim 1, wherein said proximal end is split.

1 9. A method for performing an intubation using an endotracheal tube (“ETT”) and an
2 endotracheal tube introducer (“introducer”), said introducer having a wall defining a lumen
3 extending between a proximal end and a distal end of said introducer, said wall having an outer
4 diameter that is less than an inner diameter of said ETT, and said wall being circumscribed by an
5 invertibly attached shroud for distal-ward (“forward”) flexion and proximal-ward (“rearward”)
6 flexion, comprising the steps of:

- 7 a. placing said shroud of said introducer in an anteflexed, forward conformation;
8 b. placing said proximal end of said introducer within a lumen of said ETT at a distal end
9 thereof;

10 c. advancing said proximal end of said introducer into said lumen of said ETT until a proximal
11 end of said invertibly attached shroud apposes a distal tip of said ETT;
12 d. manually flexing said shroud of said introducer from said anteflexed, forward conformation to
13 a retroflexed, rearward conformation, thereby covering said distal tip of said ETT.

1 10. The method of claim 9, wherein said proximal end of said introducer is split.

1 11. The method of claim 9, further comprising the steps of:

2 a. manually flexing said shroud of said introducer from said anteflexed, forward conformation to
3 said retroflexed, rearward conformation, thereby additionally covering Murphy eye of said ETT;
4 b. fixing said proximal end of said introducer to a proximal end of said ETT by means of surgical
5 tape or a fixation ring, thereby stabilizing said distal end of said ETT and said distal end of said
6 introducer and forming a combined introducer-ETT unit having a shrouded combined distal end;
7 c. lubricating a region between said shroud of said introducer and said distal end of said ETT
8 with surgical lubricant to prevent sticking during subsequent withdrawal of said introducer from
9 said lumen of said ETT;
10 d. introducing a malleable stylet within said lumen of said introducer forming said combined
11 introducer-ETT unit;
12 e. advancing said combined introducer-ETT unit bearing said malleable stylet within said lumen
13 of said introducer into a patient's airway;
14 f. directing said shrouded combined distal end of said combined introducer-ETT unit bearing said
15 malleable stylet between and beyond a patient's vocal cords;

16 g. removing said surgical tape or said fixation ring and withdrawing said introducer from said
17 ETT.

1 12. The method of claim 9, further comprising the steps of:

2 a. manually flexing said shroud of said introducer from said anteflexed, forward conformation to
3 said retroflexed, rearward conformation, thereby additionally covering Murphy eye of said ETT;

4 b. fixing said proximal end of said introducer to a proximal end of said ETT by means of surgical
5 tape or a fixation ring, thereby stabilizing said distal end of said ETT and said distal end of said
6 introducer and forming a combined introducer-ETT unit having a shrouded combined distal end;

7 c. lubricating a region between said shroud of said introducer and said distal end of said ETT
8 with surgical lubricant to prevent sticking during subsequent withdrawal of said introducer from
9 said lumen of said ETT;

10 d. advancing said combined introducer-ETT unit into a patient's nostril and thence into said
11 patient's nasopharynx until said combined introducer-ETT unit is visualized through said
12 patient's mouth in said patient's oropharynx;

13 e. grasping a shrouded distal end of said combined introducer-ETT unit with a forceps introduced
14 through said patient's mouth and thence directing said shrouded distal end of said combined
15 introducer-ETT unit so as to place said shrouded distal end of said combined introducer-ETT unit
16 between and beyond said patient's vocal cords;

17 f. removing said surgical tape or said fixation ring and withdrawing said introducer from said
18 ETT.

1 13. The method of claim 9, further comprising the steps of:

2 a. manually flexing said shroud of said introducer from said anteflexed, forward conformation to
3 said retroflexed, rearward conformation, thereby additionally covering Murphy eye of said ETT;

4 b. fixing said proximal end of said introducer to a proximal end of said ETT by means of surgical
5 tape or a fixation ring, thereby stabilizing said distal end of said ETT and said distal end of said
6 introducer and forming a combined introducer-ETT unit having a shrouded combined distal end;

7 c. lubricating a region between said shroud of said introducer and said distal end of said ETT
8 with surgical lubricant to prevent sticking during subsequent withdrawal of said introducer from
9 said lumen of said ETT;

10 d. inserting a fiberscope within said lumen of said introducer forming said combined introducer-
11 ETT unit;

12 e. introducing said fiberscope into a patient's airway and using said fiberscope to identify said
13 patient's carina;

14 f. advancing said combined introducer-ETT unit over said fiberscope into said patient's trachea
15 using said fiberscope as a guide wire, so as to place said shrouded combined distal end of said
16 combined introducer-ETT unit between and beyond said patient's vocal cords;

17 g. withdrawing said fiberscope from said combined introducer-ETT unit;

18 h. removing said surgical tape or said fixation ring and withdrawing said introducer from said
19 ETT.

1 14. The method of claim 9, further comprising the steps of:

2 a. manually flexing said shroud of said introducer from said anteflexed, forward conformation to
3 said retroflexed, rearward conformation, thereby additionally covering Murphy eye of said ETT;

4 b. fixing said proximal end of said introducer to a proximal end of said ETT by means of surgical
5 tape or a fixation ring, thereby stabilizing said distal end of said ETT and said distal end of said
6 introducer and forming a combined introducer-ETT unit having a shrouded combined distal end;

7 c. lubricating a region between said shroud of said introducer and said distal end of said ETT
8 with surgical lubricant to prevent sticking during subsequent withdrawal of said introducer from
9 said lumen of said ETT;

10 d. inserting a tube exchanger into an in-place ETT within a patient's airway to serve as a guide
11 wire for its removal;

12 e. withdrawing said in-place ETT over said tube exchanger;

13 f. advancing said combined introducer-ETT unit over said tube exchanger so as to place said
14 shrouded combined distal end of said combined introducer-ETT unit between and beyond said
15 patient's vocal cords;

16 g. removing said surgical tape or said fixation ring and withdrawing said introducer from said
17 ETT, leaving said ETT properly positioned in said patient's trachea.